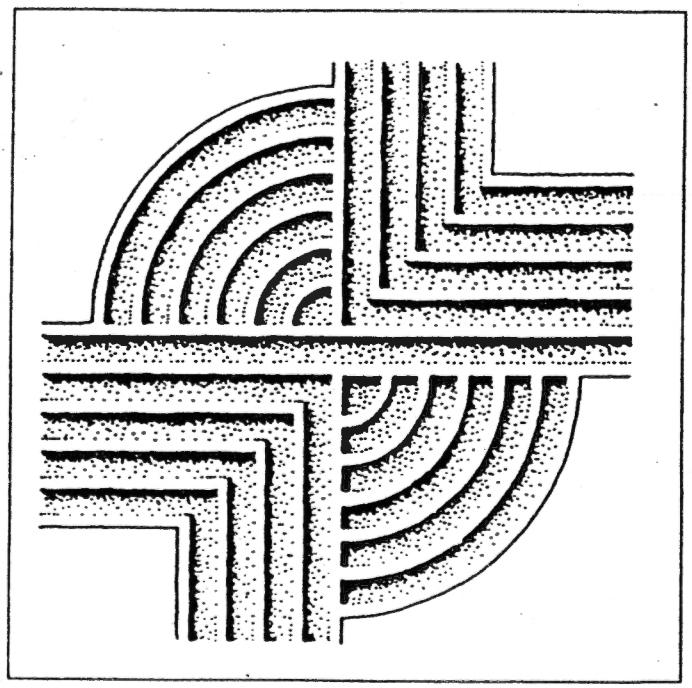
CULTURAL RESOURCES SURVEY OF THE NEW BUSH RIVER 69kV SUBSTATION, NEWBERRY COUNTY, SOUTH CAROLINA



CHICORA RESEARCH CONTRIBUTION 345

CULTURAL RESOURCES SURVEY OF THE NEW BUSH RIVER 69kV SUBSTATION, NEWBERRY COUNTY, SOUTH CAROLINA

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Chicora Research Contribution 345

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ABSTRACT

This study reports on a cultural resources survey of a proposed transmission substation in Newberry County, South Carolina. The project area, located on the north side of Bush River Road (S-56) about 700 feet west of its junction with S-64, incorporates an area measuring about 400 by 500 feet. An existing substation is situated southwest of this proposed facility and the supplying power lines, the CEPC Bush River to Jalapa Tap, is situated immediately east of the new substation. This work was conducted to assist Central Electric Power Cooperative comply with its Section 106 responsibilities and the regulations codified in 36CFR800.

The tract is to be used by Central Electric for the construction of a new substation. The proposed parcel of land is situated on a relatively low terrace of land at the toe of a ridge slope, situated between two small drainages flowing to the north.

The new substation will require clearing and perhaps grubbing, followed by construction of the proposed facility. These activities have the potential to affect archaeological and historical sites and this survey was conducted to identify and assess archaeological and historical sites which may be in the project area.

The Area of Potential Effects (APE) was defined very narrowly as encompassing a zone approximately 2,000 feet around the project site. This narrow interpretation is appropriate since the proposed substation is directly across from an existing facility and the transmission line corridor — which has greater visual intrusion than the substation itself — has already been constructed. In addition, the proposed substation is to be constructed in a low area which will significantly mask its location, making in "invisible" from a distance greater than about 0.4 mile.

Examination of the site files at the South Carolina Institute of Archaeology and Anthropology revealed that no archaeological sites were recorded in the immediate project area. Background research at the South Carolina Department of Archives and History revealed that Newberry County has not received a comprehensive historical survey. It is therefore not surprising that there are no architectural sites identified within 1.0 mile of the proposed substation. Nor are there any National Register properties, sites, districts, or objects within 1.0 mile of the proposed project.

The archaeological survey incorporated shovel testing at 100-foot intervals along transects placed at 80-foot interval. All shovel test fill was screened through ¼-inch mesh. While much of Newberry County has suffered from severe erosion, the project area, because of its low elevation and gently sloping topography revealed relatively stable soils. The second growth vegetation, however, suggests that this area was recently cleared. Soils reveal 0.4 to 0.7 foot of brown sandy soil overlying a lighter subsoil.

The survey revealed an area of disturbance in the western half of the tract. Along the south and west edges of the parcel evidence of a late nineteenth to early twentieth site was encountered, with the site extending an unknown distance to the west, outside of the study tract. Five of the shovel tests in the proposed substation were positive. Above ground indications of the site include a standing barn, scattered brick rubble, and a pile of roofing tin. Off the tract to the west was additional roofing, as well other scattered debris. The site has been designated 38NE345.

While only a portion of the site has been examined during this study, the low density of remains, coupled with the historical information which suggests that the site may post-date 1950

indicates that it is unlikely the site can address significant research questions. Consequently it is recommended not eligible for inclusion on the National Register.

An architectural survey of structures which retain their integrity and which are potentially eligible for inclusion on the National Register of Historic Places was undertaken during this study. The only site which may be potentially eligible is the original Bush River Baptist Church cemetery, which is today situated about 500 feet east of the church and just outside the APE.

As always, it is possible that unrecognized archaeological remains may be identified during construction. Construction crews should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office or to Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3). No construction should take place in the vicinity of these late discoveries until they have been examined by an archaeologist and, if necessary, have processed according to 36CFR800.13(b)(3).

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INTRODUCTION

This investigation of the proposed New Bush River substation was conducted by Dr. Michael Trinkley of Chicora Foundation, Inc. for Mr. Tommy Jackson of Central Electric Power Cooperative. The work was conducted to assist Central Electric comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

The project is situated in the western portion of Newberry County, near its boundary with Laurens County (Figure 1). The proposed substation lot is on the north side of Bush River Road (S-56) about 700 feet west of its junction with Gary Road (S-64). This new substation is almost directly across the road from the existing Bush River Substation and is to be situated on a ridge toe between two small tributaries of Bush River. Consequently, the ground slopes noticeably to the east and south, with the substation being located on a relatively level area of the ridge slope. Vegetation is mixed, but is all characteristic of an area which until the last 20 or so years had been cleared. A portion of the tract is in planted pines, while the remainder is in scrub second growth.

This new tract measures about 580 feet along Bush River Road on the south. The eastern boundary is a creek and this line is about 470 feet. The northern boundary measures about 380 feet, while to the west the arbitrary line is 280 feet. The resulting parcel is something like a trapezoid (see Figure 2).

The project tract, as previously mentioned, is intended to be used as a new substation and will be tied into the existing Central Electric Power Cooperative Bush River to Jalapa Tap, to the west and south of the project. The proposed work will require clearing and perhaps grubbing of the tract, grading, erection of a fence and placement of gravel in the lot area. There will also be construction of various towers and transformers in the substation lot. Coupled with long-term maintenance, this work will cause damage to the ground surface and any archaeological resources which may be present in the survey area.

Switching stations (as well as other above grade projects) may detract from the visual integrity of historic properties, creating what may consider discordant surroundings. The location of the tract at the toe of the slope (at a lower elevation than the exiting substation lot almost immediately across Bush River Road from this new facility) will dramatically minimize any visual intrusion. Consequently, we have elected to consider the area of potential effects (APE) to be a very modest 2,000 feet (approximately 0.4 mile) around the proposed facility. Beyond this distance it will not be possible to see the new construction.

This study, however, does not consider any future secondary impact of the project, including increased or expanded development of this rural section of South Carolina. Nor does it include any architectural survey or evaluation beyond the project APE boundaries.

We were requested by Mr. Tommy Jackson of Central Electric Power Cooperative to conduct the necessary survey on December 18, 2001. These investigations attempted to incorporated a review of the site files at the South Carolina Institute of Archaeology and Anthropology (SCIAA); however, repeated phone calls went unanswered and it was impossible, apparently because the office is closed for about three weeks around Christmas and New Year. We were, however, able to consult the South Carolina Department of Archives and History GIS for any NRHP buildings, districts, structures, sites, or objects in the study area. No historic sites are present within a mile of the survey area, although there has been no comprehensive survey of Newberry County. Archival and historical research

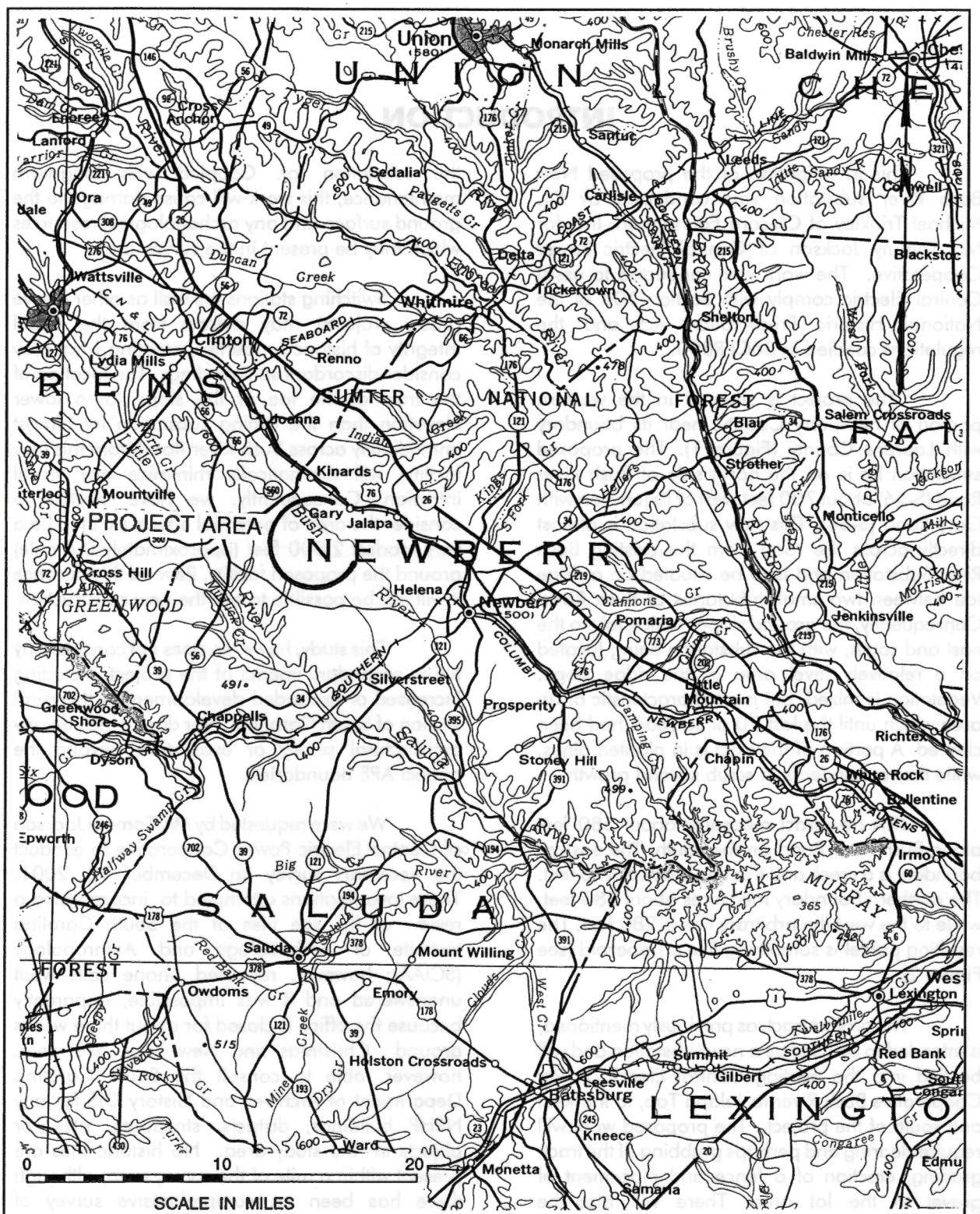

Figure 1. Project vicinity in Newberry County (basemap is USGS South Carolina 1:500,000).

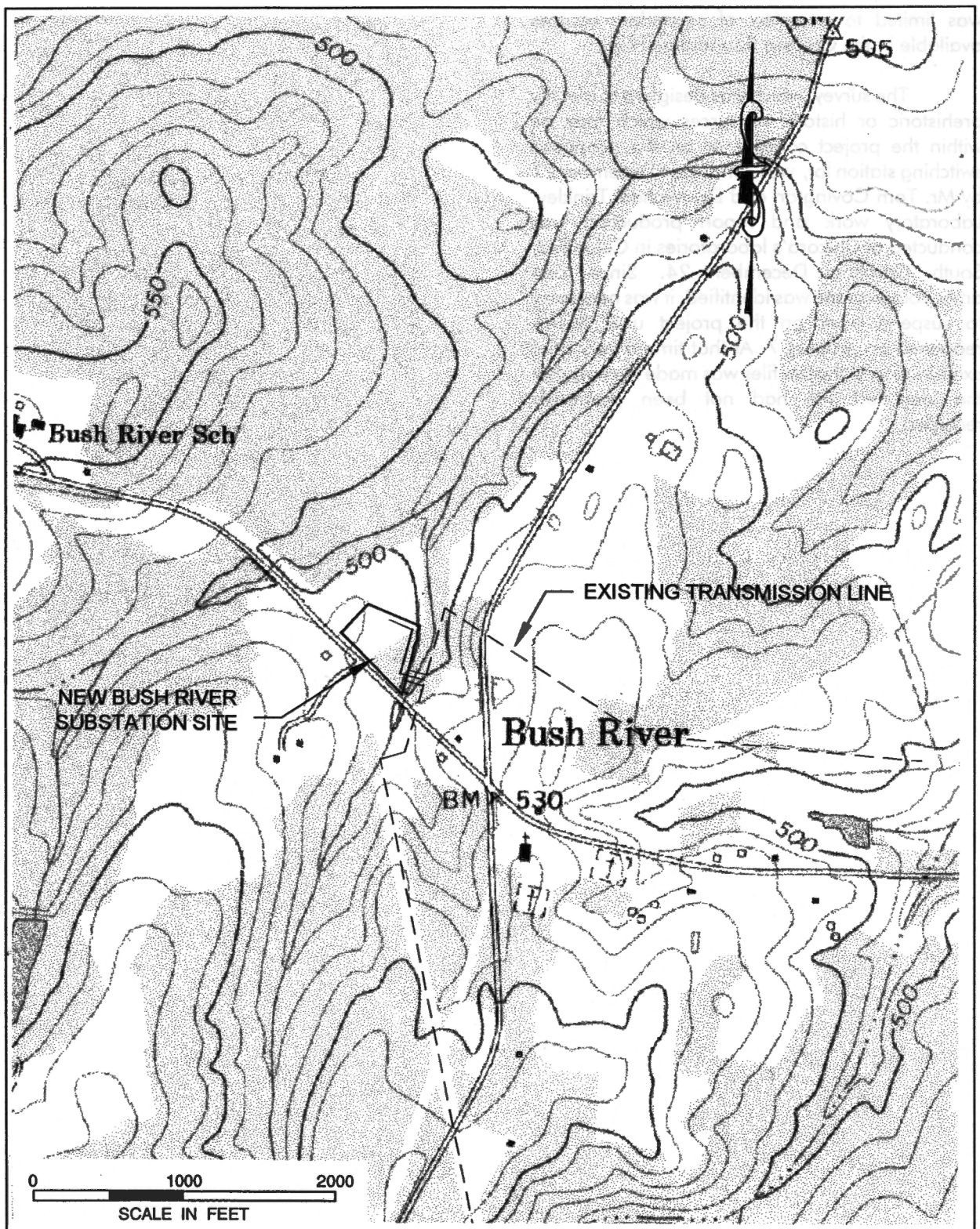

Figure 2. Survey area (basemap is Bush River 7.5' USGS)

was limited to a review of secondary sources available in the Chicora Foundation files.

The survey, which was designed to identify prehistoric or historic resources which may be within the project corridor or on the proposed switching station lot, was conducted December 21 by Mr. Tom Covington and Dr. Michael Trinkley. Laboratory work and report production was conducted at Chicora's laboratories in Columbia, South Carolina December 24. Since one archaeological site was identified, it was necessary to suspend work on the project until SCIAA reopened on January 7. At that time a very brief examination of the site files was made to verify that the identified site had not been previously recorded.

NATURAL ENVIRONMENT

Physiographic Province

Newberry County is bounded to the north by Union County, to the west by Laurens County, to the south by the Saluda River and Greenwood, Saluda and Lexington counties, and to the east by the Broad River and Richland and Fairfield counties.

The county is located within the Piedmont region. Physiographically, the county is a thoroughly dissected plain. The relief ranges from nearly level to steep, but it is dominantly gently sloping to moderately steep (Camp 1960:1). In the project area elevations range from about 520 feet above mean sea level (AMSL) to about 500 feet AMSL. In general the elevations drop to the south, toward Lake Murray which separates Newberry County from Saluda and Lexington Counties.

Figure 3. View of the project area from Bush River Road (S-56) looking northwest.

The drainages form a dendritic pattern and throughout the Piedmont this terrain has been extensively dissected and degraded. The Broad River drains the northern and eastern portions of the county, and the Saluda River drains the southern and western areas. Numerous smaller streams (such as those which drain northward on either side of the project area) are found throughout the county.

Geology and Soils

Most of the rocks of the Piedmont are gneiss and schist, with some marble and quartzite (Hasselton 1974). Some less intensively metamorphosed rocks, such as slate, occur along the eastern part of the province from southern Virginia into Georgia. This area, called the Slate Belt, is characterized by slightly lower ground with wider river valleys. Consequently, the Slate Belt has been favored for reservoir sites (Johnson 1970), as well as prehistoric occupation (see Coe 1964). In Newberry County the soils are formed in saprolite that weathered from crystalline rocks and "Carolina slates". Soils from the river floodplains formed in sediment that washed from the uplands of the Piedmont

province.

The project area is primarily situated on gently sloping Wilkes sandy loams. The parent material of these soils was residuum weathered from acidic, crystalline rocks and the soils have developed under forests of oak, cedar, and pines. Virtually all of this soil was, at one time, under cultivation, although most has subsequently reverted to forest — as the case in the study tract (Camp 1960).

Wilkes sandy loams consist of an Ap horizon of brown (7.5YR5/4) sandy loam about 0.7 foot in depth overlying a B2 horizon of strong brown (7.5YR5/8) to yellow, brown, red, or mottled sandy clay to a depth of about 1.1 feet. Below this is a C horizon of strong brown (7.5YR5/8) sandy clay loam. This profile was generally encountered in the study area, although the Ap horizon was truncated, often no greater than about 0.4 foot in depth (including recent humus).

In fact, the 1934 South Carolina Erosion Survey by M.W. Lowry found that this portion of Newberry County exhibited moderate sheet erosion with occasional gullies (Lowry 1934). This portion of Newberry County has lost up to 0.7 foot of soil through erosion in the nineteenth and early twentieth centuries (Trimble 1974:3). It is part of the area classified by Trimble as having high antebellum erosion land use with postbellum continuation and belonging to his Region III — the Cotton Plantation Area (Trimble 1974:15).

During the late 1950s and early 1960s the area was used as a cattle feed lot, presumably being logged some time prior to that activity. By the early 1990s it was abandoned, many of the buildings destroyed, and a portion was planted in pines, while the remainder was allowed to grow up in scrub. All of these activities have caused additional impacts to the property. For example, the United States Forest Service has determined that logging accounts for upwards of 0.36 tons of soil erosion per acre per year in this region, while areas of skid trails have erosion rates of about 9.91 tons per acre per year. The simple process of mechanical site preparation causes the loss of 6.67 tons of soil per acre per year (U.S. Department of Agriculture 1980:25). This is clearly evidenced in the shovel testing program conducted in areas near the project tract.

In 1826 Robert Mills remarked that there were four types of soil present in the county, including clays, sands, gravels, and "stony" soil. He noted that:

> The lands are too much neglected; no system of manuring them when they begin to fail is pursued. The practice has been to turn them out; the consequence of which is, that they are washed into gullies and destroyed (Mills 1826: 653).

Fairfield planter William Ellison remarked in 1828 that "the successful cotton planter sits down in the choicest of his lands, slaughters the forest, and murders the soil" (quoted in Ford 1988:38). In 1842 agricultural reformer Edmund Ruffin warned of impending disaster from the reliance on cotton and observed that little effort was being made to protect the land (Ruffin 1843:73).

In spite of these early warnings, the South Carolina Department of Agriculture, Commerce, and Immigration, as late as 1907, found no reason to remark on the threat of erosion, noting only that "the second best cotton lands are found in [nearby] Anderson and Laurens Counties" (State Department of Agriculture, Commerce, and Immigration 1907:255). Newberry itself boasted of six cotton seed oil mills and ranked eighth in cotton production in 1904, increasing to sixth in 1906 (State Department of Agriculture, Commerce, and Immigration 1907:269, 288).

Climate

Elevation, latitude, and distance from the coast work together to affect the climate of South Carolina, including the Piedmont. In addition, the more westerly mountains block or moderate many of the cold air masses that flow across the state

Figure 4. View of planted pines on the survey tract, looking to the north.

from west to east. Even the very cold air masses which cross the mountains are warmed somewhat by compression before they descend on the Piedmont.

Consequently, the climate of Newberry County is temperate. The winters are relatively mild and the summers warm and humid. Rainfall in the amount of 44 to 48 inches is adequate, although less than in some neighboring counties. About 24 to 28 inches of rain occur during the growing season, with periods of drought not uncommon during the summer months. As Hilliard illustrates, these droughts tended to be localized and tended to occur several years in a row, increasing the hardship on those attempting to recover from the previous year's crop failure (Hilliard 1984:16). Perhaps the best wide-scale example of this was the drought of 1845, which caused a series of very serious grain and food shortages throughout the state.

The average growing season is about 221 days, although early freezes in the fall and late frosts in the spring can reduce this period by as much as 20 or more days (Camp 1960:2). Consequently, most cotton planting, for example, did not take place until early May, avoiding the possibility that a late frost would damage the young seedlings.

Floristics

Piedmont forests generally belong to the

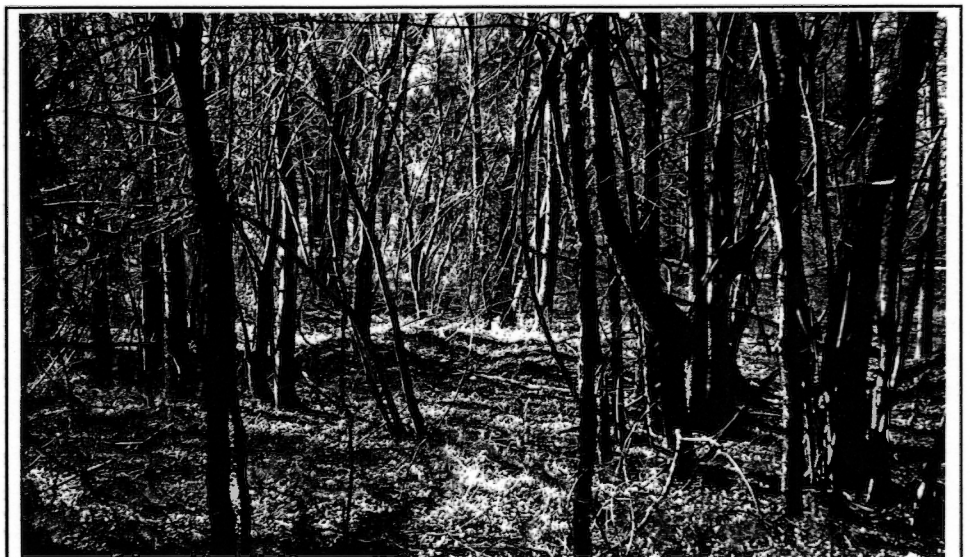

Figure 5. Scrub vegetation on the lower elevations of the study tract, looking north.

Oak-Hickory Formation as established by Braun (1950). The potential natural vegetation of the area is the Oak-Hickory-Pine forest, composed of medium tall to tall forests of broadleaf deciduous and needleleaf evergreen trees (Küchler 1964). The major components of this ecosystem include hickory, shortleaf pine, loblolly pine, white oak, and post oak. In actuality, the Piedmont is composed of a patchwork of open fields, pine woodlots, hardwood stands, mixed stands, and second growth fields. Shelford (1963) includes the Carolina Piedmont in the Oak-Hickory zone of the Southern Temperate Deciduous Forest Biome.

Today the "patchwork" is more than ever clearly visible. The survey tract includes an area of planted pines, as well as much second growth scrub vegetation which has taken over the abandoned feed lot.

PREHISTORIC AND HISTORIC OVERVIEW

Previous Research

The Piedmont has been the focus of considerable archaeological research. Derting et al. (1991), for example, cite 93 studies specific to Newberry County. Virtually all of these are compliance related, with 62% being surveys or similar studies produced by the U.S. Forest Service on their Sumter National Forest lands. The next most common studies are those produced by the South Carolina Department of Highways, with their surveys accounting for an additional 26% of the pre-1991 literature for the county.

There is no single synthesis of the area's archaeology. An overview of the Sumter National Forest was prepared by Patricia Logan nearly two decades ago, but has not been published (Logan n.d.). Other researchers, however, have provided considerable information on the region. In particular, the Paleoindian and Early Archaic is carefully explored by a variety of authors in an edited volume by Anderson and Sassaman (1996). These same researchers have also explored the Middle and Late Archaic (Sassaman and Anderson 1994). The Woodland and Mississippian is less well researched for the Piedmont, although Anderson (1994) does provide a generalized overview.

An effort was made, prior to this field research, to conduct background studies at the South Carolina Institute of Archaeology and Anthropology (SCIAA). This was not possible since that agency is apparently closed for nearly three weeks, participating in the University's Christmas break. Since an archaeological site was identified during the study, the completion of this report was held up pending SCIAA reopening for business. At that time a brief check was made to ensure that the site had not been previously recorded, but no further background studies were conducted because of the scheduling delay.

In contrast, the South Carolina Department of Archives and History maintained a normal business schedule over the holidays and there was no problem scheduling the use of their GIS to determine if there are National Register buildings, districts, structures, sites, or objects in the survey area. None are present. Moreover, it was possible to determine that Newberry County has not received a comprehensive architectural survey.

Prehistoric Overview

In the Carolina Piedmont, lithic scatters are the most common type of prehistoric site encountered. Goodyear et al. (1979:131-145) found that lithic scatter sites located in the inter-riverine Piedmont were geographically extensive and exhibited little artifact diversity. These sites have been interpreted as:

> limited or specialized activity sites which represent resource exploitation or other distinct functions. Nearly all investigators working in the Piedmont have related these sites to activities involving hunting, nut gathering, and procuring of lithic raw materials (Canouts and Goodyear n.d.:8).

Although the vast majority of these sites are located in eroded areas and exhibit little to no subsurface integrity, Canouts and Goodyear (1985) argue that they have analytical value. This value lies in their horizontal rather than vertical dimensions. They argue that:

> [f]uture investigators of upland sites must effect broad-scale spatial analyses comparable to the temporal analyses effected

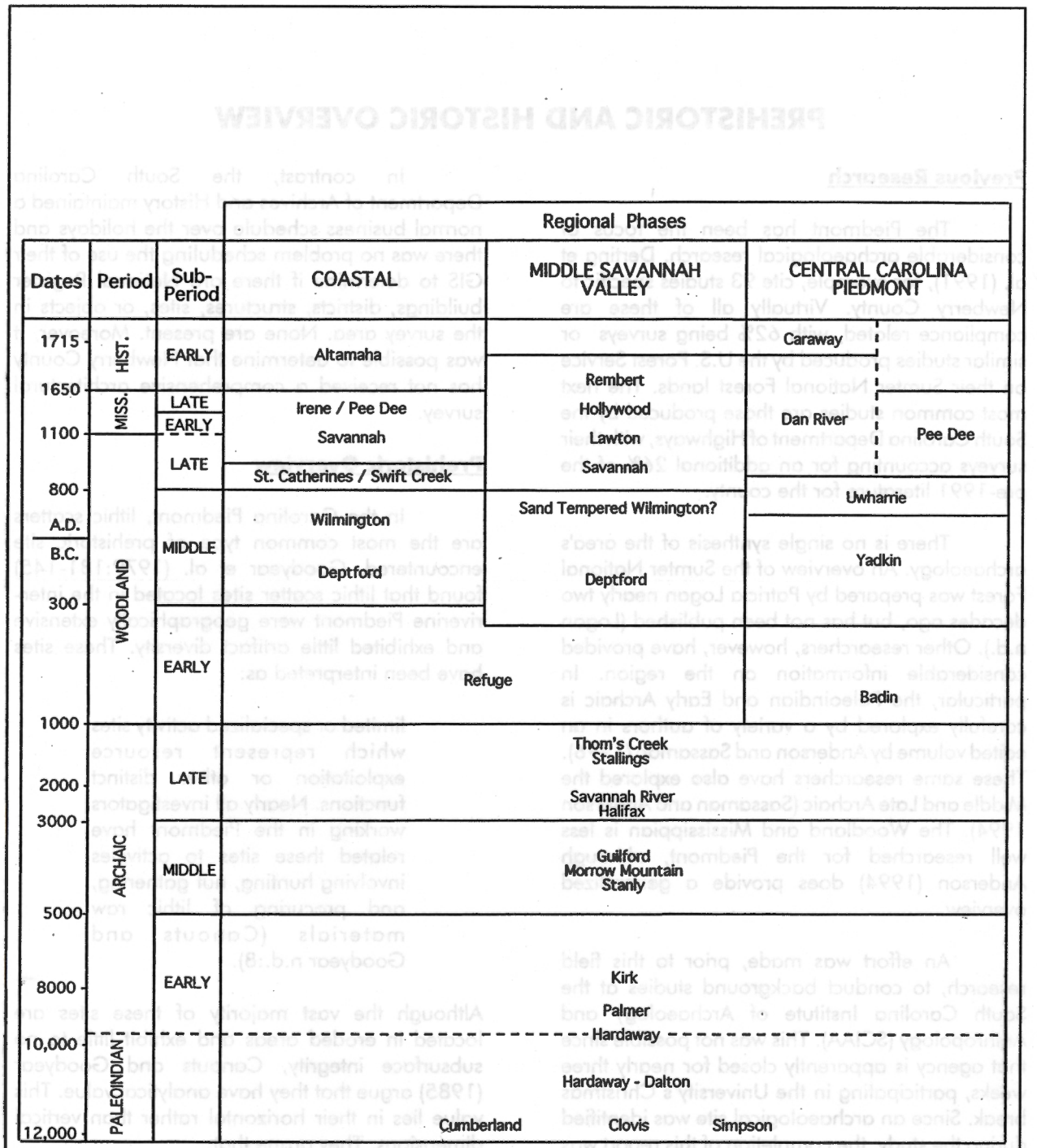

Figure 6. Generalized cultural sequence for South Carolina.

through excavation of deeply stratified sites. Both endeavors are necessary, and neither is sufficient for the total understanding of Piedmont prehistory" (Canouts and Goodyear 1985: 193).

One observation that Canouts and Goodyear (1985) made is that lithic raw material ratios change through time. For instance, at the Gregg Shoals site in Elbert County, Georgia, the Early Archaic assemblage reflects greater use of non-local cryptocrystalline materials and the Late Archaic, greater use of non-quartz local material (see Tippitt and Marquardt 1981). Examination of changing use of lithic resources will help archaeologists better understand issues such as the extent of seasonal rounds, trade networks, and social organization. Clearly, the discussions by Canouts and Goodyear (1985) argue strongly for a higher regard for the "lowly" lithic scatter — a very common occurrence in the Piedmont.

Figure 6 provides an overview of the cultural sequence commonly found in the Piedmont of South Carolina.

Paleoindian Period

The Paleoindian period, lasting from 12,000 to 8,000 B.C., is evidenced by basally thinned, side-notched projectile points; fluted, lanceolate projectile points; side scrapers; end scrapers; and drills (Coe 1964; Michie 1977). The Paleoindian occupation, while widespread, does not appear to have been intensive. Points usually associated with this period include the Clovis and several variants, Suwannee, Simpson, and Dalton (Goodyear et al. 1989:36-38).

Unfortunately, little is known about Paleoindian subsistence strategies, settlement systems, or social organization. Generally, archaeologists agree that the Paleoindian groups were at a band level of society, were nomadic, and were both hunters and foragers. While population density, based on the isolated finds, is thought to have been low, Walthall suggests that toward the end of the period, "there was an increase in population density and in territoriality and that a number of new resource areas were beginning to be exploited" (Walthall 1980:30).

Very little work in the state has been able to focus on Paleoindian settlements because of the rarity of the site type. No evidence was found for Paleoindian occupation in the Laurens-Anderson inter-riverine area, which is not surprising since elsewhere in the state these sites are usually found clustered along major drainages and their tributaries which is interpreted by Michie (1977:124) to support the concept of an economy "oriented towards the exploitation of now extinct mega-fauna."

One site identified in the Sumter National Forest (Price 1992), in neighboring Laurens County, is believed to have a possible Paleoindian component (38LU317). It is situated on a ridge saddle adjacent to a spring which feeds into the Enoree River, located only about 0.3 miles to the north. This fits well with previous arguments that Paleoindian sites will be located adjacent to major drainages.

Anderson (1992:32) suggests that the comparatively low density of Paleoindian diagnostics in South Carolina may be because the state could have been on the edge of the ranges of groups centered in other areas. He suggests that permanent settlements elsewhere probably occurred later in the Paleoindian period, only when population levels had grown appreciably in these centers. This would help to explain the overlap in stylistic traditions (such as the Clovis, Suwannee, Simpson, and Dalton) observed in South Carolina which perhaps resulted from populations expanding outward from these centers.

Archaic Period

The Archaic period, which dates from 8000 to as late as 500 B.C. in the Piedmont, does not form a sharp break with the Paleoindian period, but is a slow transition characterized by a modern climate and an increase in the diversity of material culture. Archaic period assemblages, characterized by corner-notched, side-notched,

and broad stemmed projectile points, are common in the vicinity, although they rarely are found in good, well-preserved contexts (for a thorough discussion of the Early Archaic, see Anderson and Sassaman 1996, while Anderson and Joseph (1988) offer a review of prehistoric archaeology along the upper Savannah River).

Prehistoric sites in the Piedmont inter-riverine zones are for the most part characterized as "upland lithic scatters" (House and Wogaman 1978:xii). These sites are shallow deposits without stratigraphic definition, contain a diversity of artifacts, and are commonly disturbed by plowing and/or erosion (Canouts and Goodyear 1985; Trinkley and Caballero 1983:27).

Early Archaic

During the Laurens-Anderson study (Goodyear et al. 1979), four sites with Early Archaic components were identified. Each of these sites contained a single example of Dalton[1] points or probable Dalton preforms made of indigenous Piedmont quartz. The following Palmer phase was found to be very common in the area and was represented by 28 sites. While most of the specimens were manufactured from the local quartz, some were manufactured from Coastal Plain chert from the Flint River formation located in the lower coastal plain of South Carolina and Georgia. There were also examples of metavolcanic rhyolite from the Carolina Slate Belt and what may be "Ridge and Valley chert" from eastern Tennessee.

At these sites a wide range of tool types were identified including a large number of unifacial and flake tools believed to be associated with the Early Archaic occupation. Goodyear et al. (1979:197) found that while Early Archaic sites with unifaces were found throughout the corridor, sites on ridgetops which were large watershed divides produced higher counts. They believe that the large number of sites producing Palmer points is related to environmental changes at that time. The large diversity in lithic raw material provided information regarding their "mobility patterns and regions of interactions" (Goodyear et al. 1979:198).

Anderson and Hanson's (1988) band/macroband model of Early Archaic settlement was formulated primarily to evaluate data from the Savannah River basin. In the Savannah River Valley, settlement organization of the Early Archaic people was "characterized by the use of a logistically provisioned seasonal base camp or camps during the winter, and a series of short-term foraging camps throughout the remainder of the year" (Anderson 1992:36). During the early spring, the groups are believed to have moved toward the coast, then back into the upper coastal plain and piedmont during the later spring, summer, and early fall. During the winter they returned to their base camp incorporating some side trips to other drainages for aggregation events by groups from two or more different drainages. These aggregation sites are believed to have been located on Fall Line river terraces (Anderson 1989a:36). One example of a postulated base camp is the G.S. Lewis site at the Savannah River Site. This site is located on a ridge adjacent to the confluence of Upper Three Runs Creek and the Savannah River. Given this scenario for the Savannah River basin (which likely applies to other river basins), Early Archaic sites in the Piedmont were likely occupied from summer until fall and don't include aggregation sites. Anderson and Hanson (1988) place the Upper Piedmont in the Saluda/Broad macroband settlement system. At the band level, they proposed "co-residential population aggregates" consisting of 50 to 150 people which occupied and moved primarily within one drainage basin. They projected that individual macroband population was between 500 and 1500 people. They also formulated a spatial model for the distribution of individual bands over the South Atlantic Slope.

Anderson (1989b) notes that data from the Savannah River Site and the Richard B. Russell Reservoir "suggest that a decline in utilization of the Coastal Plain may have occurred at the same time as an increase in utilization of the Piedmont

[1] Some researchers (see, for instance, Anderson 1992) classify Dalton as Paleoindian while others (Goodyear et al. 1989) classify it as Archaic.

[and] may be a part of a trend noted in the terminal Early Archaic in the general region. Settlement patterning in any given area was thus likely shaped by a range of variables, such as local resource structure, as well as by more regional trends in climate, population density, and these patterns apparently changed appreciably over time" (Anderson 1992:39). Data from the Laurens-Anderson study and the Savannah River project suggests that inter-riverine sites will be found on hills between watershed divides and riverine sites will be located on knolls adjacent to a major confluence.

Middle Archaic

Morrow Mountain and Guilford points constituted the primary evidence for Middle Archaic (5000 to 3000 B.C.) occupation in the Laurens-Anderson corridor (Goodyear et al. 1979). Morrow Mountain constituted the vast bulk of these projectile points and were present in both the I and II varieties.[2] Over 95% of the 145 points were manufactured from the local quartz, which parallels other findings in Piedmont South Carolina. Guilford was not nearly as prominent and consisted of 35 finished specimens or preforms, all of which were manufactured from quartz.[3]

The Middle Archaic period was found to consist of the largest number of sites. In terms of geographic distribution, Goodyear et al. (1979) found that the Morrow Mountain phase was much like the Palmer phase, with sites occurring on ridges between watersheds. However, the almost complete reliance on local quartz separates the Morrow Mountain and Guilford phase sharply from the earlier Palmer phase. They suggest that "[t]he large number of Middle Archaic sites well dispersed through the inter-riverine areas and the abundant nature of chipped quartz remains on these sites suggest frequent movement and activity throughout the Piedmont of South Carolina" (Goodyear et al. 1979:207). Data from early reservoir projects (see, for example, Wauchope 1966) as well as inter-riverine observations by Caldwell (1954; 1958) and Coe (1952) made it clear that there were sharp contrasts between riverine and inter-riverine sites in terms of artifact diversity and density, and in the use of shellfish (Sassaman and Anderson 1994:134). With the advent of cultural resource management in the 1970s, additional data was available and further emphasized these differences. All of this data indicated that the largest and densest sites were located along large rivers, and that small, sparse sites were found throughout the uplands. While these differences were clear, what remained unclear was the relationship between riverine and inter-riverine sites in a settlement-subsistence system, and how, if at all, this system changed over time (Sassaman and Anderson 1994:135).

House and Ballenger studied this issue during their survey work on the proposed Interstate 77 project in 1976. They classified riverine zones of containing only the largest rivers while inter-riverine zones consisted of smaller rivers and streams. House and Ballenger (1976) argued that streams with a ranking of 3 or higher[4] contained

[2] Coe (1964) describes Morrow Mountain I as a small triangular blade with a short pointed stem, while the Morrow Mountain II is described as a long narrow blade with a long tapered stem. While he describes them as different types, he notes that many people have chosen not distinguish between the two.

[3] Preforms represent an intermediate stage between flakes from secondary cores and quarry blades. Some are worked bifacially, although most are unifacial and still retain the platform and bulb of percussion. Quarry blades are usually bifacially worked and are made to allow easy transportation of lithic materials until the time it is needed to be made into a projectile point. Some researchers have used the terms preform and quarry blade interchangeably, meaning the bifacially worked ovate blade.

[4] According to the system, based on Strahler (1964) 1st order streams are the fingertip tributaries at the head of a stream and may either be year-round or seasonally flowing streams. A 2nd order stream is formed by the confluence of two 1st order streams. A 3rd order stream is formed by the confluence of two 2nd order streams, etc. This system requires that at least two streams of a given order be joined to form a stream of the next highest order. The main stem of a river will

resources that were not abundant in the uplands (fish, turtle, raccoon, etc.), whereas smaller streams had a higher density of deer and nut masts. The resulting archaeological assemblages from these distinct areas should, themselves, be distinct (House and Ballenger 1976; Sassaman and Anderson 1994). They divided their sites into habitation and extraction sites[5] using a lithic tool classification scheme that would allow functional sorting of the two site types. From the information gathered using this analysis, coupled with data on the seasonal availability of resources, they created a Middle and Late Archaic settlement model:

> involving spring and summer residence along major rivers; a move to seasonal base camps in upland creek valleys in September to take advantage of deer concentration in upland hardwood zones, with some exploitation of other resources as well; and then a return to riverine-located winter quarters with permanent houses in about December when the coldest months arrived, the deer rutting season came to an end, and the acorn mast in the hardwood forests began to be exhausted (House and Ballenger 1976:117).

The Windy Ridge site (House and Wogaman 1978), while fitting the expected upland site profile as proposed by House and Ballenger (1976), may have been used as a habitation site during the Middle Archaic. Other projects also complicated the model. Work in the Richard B. Russell Reservoir (Anderson and Schuldenrein 1985; Tippett and Marquardt 1981) examined a number of sites with Morrow Mountain components. Interestingly, none of these riverine sites produced denser or more diverse remains than did inter-riverine sites. This suggested that Middle Archaic people were not using the riverine and inter-riverine areas much differently in this part of the state (Sassaman and Anderson 1994:137).

Sassaman (1983) attempted to more closely examine Middle and Late Archaic settlement patterns by examining sites from a number of piedmont studies. He found that Middle Archaic settlement in the South Carolina Piedmont did not fit the riverine-inter-riverine model. This suggested that Middle Archaic people were much more mobile, perhaps moving residences every few weeks which fit Binford's (1980) definition of a foraging society. Binford (1980) proposed that foragers had high levels of residential mobility, moving camps often to take advantage of dispersed, but similar resource patches. Collectors stayed in one location longer, by sending out specialized work parties to exploit resources in widely dispersed and distinct resource patches. He believed that differences in environmental structure could be traced to large scale climactic factors. He further noted that a collector system could arise under any conditions that limited the ability of hunter-gatherers to relocate residences. During his work in the Haw River area of North Carolina, Cable (1982) argued that postglacial warming at the end of the Pleistocene led to increased vegetational homogeneity which encouraged foraging.[6]

Sassaman (1983) suggests that this indicates a large degree of homogeneity of the piedmont environments. They also had a high degree of social flexibility, allowing them to pick up and move when needed. This high level of mobility did not allow them to transport much material, which in turn, alleviated the need for elaborate or specialized tools to procure and

always have the highest order.

[5] An extraction site is an area where resources (such as fish, lithic raw material, etc.) were obtained and is often represented by lithic debitage and perhaps small camp sites. A habitation site is a seasonal or temporary camp where these resources were usually consumed, used, or worked.

[6] Since the vegetation was homogeneous and there were no concentrations of resources people moved from place to place foraging rather than settling near or in these resource concentrations.

process resources at locations distant from camp. Since quartz is practically everywhere in the piedmont, tools could be easily replaced and were expedient. The high mobility and the expediency of tools helps to explain the abundance of Middle Archaic sites in the piedmont without having to imply a population explosion. Sassaman called this model the "Adaptive Flexibility" model (Sassaman 1983; Sassaman and Anderson 1994).

Late Archaic

Savannah River Stemmed and Otarre[7] stemmed points are the primary indicators of Late Archaic settlement in the Laurens-Anderson study area. Ten Savannah River phase sites and seven Otarre phase sites were identified. Quartz tools, which were found in overwhelming abundance at earlier sites, consisted only of about 57% of the Savannah River assemblage. Other materials included "silicates, volcanic slate/argillite, and unknown igneous/metamorphic" (Goodyear et al. 1979:207). The Otarre assemblage reflected a trend away from igneous/metamorphic rock, with a concentration of quartz and siliceous materials. The incorporation of more types of lithic raw material as well as the fact that Late Archaic diagnostics are much fewer than Middle Archaic diagnostic artifacts indicates a sharp decrease in residential mobility.

Many of these Late Archaic sites produced fire cracked rock which was found on major ridges between watersheds. Goodyear et al. (1979:209-210) found that the inter-riverine picture of the Late Archaic contrasted quite sharply with river sites. Artifacts at riverine sites were diverse and included steatite vessels and netsinkers[8], ground stone axes, rock mortars and handstones, atlatl weights, and chipped stone drills. In the upland sites, the assemblage consists almost entirely of chipped stone bifaces and debitage. Purrington (1983) also noted this trend for the mountain region of North Carolina. At the Savannah River Plant, both riverine and upland sites contained a full range of tools, but no architectural features have been located.

Soapstone became an important lithic resource in the Late Archaic period for manufacturing of cooking vessels, and a number of soapstone quarries have been identified in Spartanburg and Cherokee counties (Ferguson 1976). Unfortunately, little is known about patterns in local soapstone use, although Elliott (1981) argues that soapstone exchange in the upcountry was facilitated by local reciprocal relationships. Soapstone was also probably used as a mechanism to maintain long distance relationships through long distance trade. Sassaman et al. state that:

> [c]ompared to sites in the upper and lower reaches of the Coastal Plain, a higher proportion of sites in the middle portion of the plain contain soapstone artifacts. This may indicate that soapstone distributions were not merely the result of distance-decay from sources, but were much more dependent on the social composition of exchange alliances (Sassaman et al. 1988:90).

For the Late Archaic, John White (1982) also applied a riverine/inter-riverine dichotomy. He demonstrated that riverine sites were much more dense and diverse than inter-riverine sites, but also identified the existence of diverse and sometimes dense assemblages at upland sites. He argued that they were habitation camps during

[7] According to Oliver (1981) the Otarre type is contemporaneous with the Savannah River stemmed type and fall within the category of "Small Savannah River Stemmed".

[8] Sassaman (1991:87-88) states that "perforated and grooved objects are common items in Late Archaic assemblages of the Savannah River Valley. Both the grooved and perforated varieties have been referred to as "netsinkers", but the more common perforated slave was apparently used as a cooking stone."

periods of seasonal dispersal from riverine aggregation bases.

Although Steven Savage (1989) has proposed a "Late Archaic Landscape" model, a number of researchers (i.e. Anderson 1989a; Cable 1994; and Rafferty 1992) have noted that his study was seriously flawed by the "misappropriation of data from the Richard B. Russell survey" (Sassaman and Anderson 1994:142). The purpose of the work was to attempt to apply the locational methods of GIS to the analysis of Late Archaic social systems in the Upper Savannah River Valley. However, he only chose to use early intensive survey data and ignored subsequent data from testing and excavation. In addition, he chose to ignore problems such as multicomponentcy and representativeness (Cable 1994). Although it was considered a noteworthy study since it was the first to use Geographic Information Systems (GIS) for the analysis of settlement distribution, "the errors detract from the potential value of Savage's approach" (Sassaman and Anderson 1994:142).

Woodland Period

The Woodland period begins, by definition, with the introduction of fired clay pottery about 2000 B.C. along the South Carolina coast and much later in the Carolina Piedmont, about 500 B.C. Regardless, the period from 2000 to 500 B.C. was a period of tremendous change.

The subsistence economy during this period was based primarily on deer hunting and fishing, with supplemental inclusions of small mammals, birds, reptiles, and shellfish. Various calculations of the probable yield of deer, fish, and other food sources identified from some coastal sites indicate that sedentary life was not only possible, but probable. Further inland it seems likely that many Native American groups continued the previous established patterns of band mobility. These frequent moves would allow the groups to take advantage of various seasonal resources, such as shad and sturgeon in the spring, nut masts in the fall, and turkeys during the winter.

Early Woodland

Brooks and Hanson (1987) noted significant changes in the density and distribution of upland tributary sites during the Woodland period in the Steel Creek area of the Savannah River Plant. Brooks proposed that as tributary associated habitats became more productive with floodplain maturation that upland tributary terraces became areas of more permanent occupation. For the Savannah River area, the data suggested to Brooks that annual settlement ranges in the Early Woodland period were restricted to tributary watersheds (Sassaman et al. 1990:315).

Artifacts typical of the Early Woodland in the Upper Piedmont consist of Dunlap and Swannanoa ceramics (similar to the Kellogg focus of Northern Georgia). The Dunlap series is characterized by a medium to coarse sand paste, fabric impressions, and vessels with a simple jar or cup form. The Swannanoa ceramics, with heavy crushed quartz temper, are cord marked or fabric impressed conoidal jars and simple bowls. Other surface treatments consist of simple stamping, check stamping, and smoothed plain (Keel 1976:230). Early Woodland projectile point types consist of Savannah River Stemmed (and its variants) and Swannanoa Stemmed.

Land use during the Early Woodland period in some areas of the Piedmont suggests extensive use of the inter-riverine zone. Two sites (one in Greenville County and one in Laurens County) contained dense remains and were located on the south face of a slope adjacent to springs. Goodyear et al. (1979:230) suggest that these sites "reflect a fall-winter occupation period with subsistence activities primarily related to nut gathering and deer hunting. If these two sites in fact represent fall-winter base camps it would represent a strong break with previous Archaic systems and their settlement strategies for exploiting inter-riverine biotic resources". Based on these previous studies, Early Woodland sites are most likely to be found adjacent to springs or the upland terraces of tributaries.

Middle Woodland

The Middle Woodland period is found "virtually lacking" in the Laurens-Anderson interriverine zone. One densely occupied site in adjacent Laurens County was found in an unusually large floodplain of a rank 2 stream. Goodyear et al. state that:

> [g]iven the habitation like character of this site, plus the large number of simple stamped bearing floodplain sites along larger streams such as the Reedy River, it is tempting to see agriculture playing a role in the apparent re-orientation to floodplain environments during the middle Woodland period in the Piedmont environment. In this regard, the middle Woodland period sites and their locations would seem to presage the late prehistoric Mississippian period pattern during the latter, where large agriculturally related villages were constructed along fertile stretches of floodplain (Goodyear et al. 1979:230-231).

This new pattern is also reflected in the Savannah River Valley where Savannah terrace sites at the mouth of Upper Three Runs Creek were being occupied again for intensive settlement. Midden accumulations at several sites indicate long term occupation or repeated occupations of these sites by relatively large groups (Sassaman et al. 1990:315).

Pottery typical of the Middle Woodland in the Upper Piedmont consists of the Pigeon and Cartersville series. Pigeon is quartz tempered with surface treatments of check stamping, simple stamping, and brushing. The Cartersville type is characterized by sand or grit paste with the primary surface treatment being cordmarking, although there are also check stamped and simple stamped varieties. The Cartersville series is thought to be closely related to the Deptford series on the Coast. Anderson and Schuldenrein (1985:720) suggest that Cartersville continues well into the Late Woodland period. Projectile points typically found in association with these pottery are the Pigeon Side Notched and Corner Notched types.

Testing at 38LU107 (Wood and Gresham 1981) demonstrated that one of the most intensive occupations of this multicomponent site was during the Middle Woodland period. This site is located on a knoll adjacent to South Rabon Creek, near its confluence with North Rabon Creek. A number of features were encountered including a large, deep pit, post holes, and a stone hearth. This indicated that even sites on plowed knolls can and do produce subsurface features.

Since the Middle Woodland period reflects a new pattern of settlement, questions regarding how quickly this change occurred and how the transition to horticulture affected their material culture should be examined. Clearly, this change did not occur over night and perhaps examination of radiocarbon dates from upland and riverine sites during this transition period will begin to clarify questions regarding change in lifeways.

Late Woodland

Small triangular points which are generally believed to be diagnostic of the Late Woodland and Mississippian periods consisted of 12 examples in the Laurens-Anderson study. Ten of these were manufactured from quartz while the other two where manufactured from either rhyolite or a Piedmont silicate. These projectile points were typed as "Mississippian triangulars" and included what they believed were Uwharrie or Pee Dee Triangular types and the Hamilton Incurvate Triangular type. Napier and Connestee Series pottery are typical Late Woodland types for the Upper Piedmont region. The Napier series is a fine sand tempered ware with fine complicated stamped designs. The Connestee series is a thin walled sand tempered ware with brushed or simple stamped surface decorations. There are also cordmarked, check stamped, fabric impressed, and plain varieties (Trinkley 1990).

According to Sassaman et al. (1990:317) Late Woodland occupations in the Savannah River Valley consisted of small habitation sites along all available terrace locations of both tributaries and the Savannah River. This increasing use of low-lying terraces suggests the increased exploitation of floodplain habitats, perhaps including maize agriculture, although no direct evidence has yet been found at the Savannah River Site.

Keel (1976) reported on the Garden Creek Mound No. 3 which contained a dominant Connestee component based on George Heye's 1915 examination of the mound. Later work at Garden Creek Mound No. 2 examined a portion of a village with a large quantity of Connestee remains. A number of post holes were exposed revealing one discernable square house with rounded corners measuring about 19 by 19 feet in outline. In addition, there were a number refuse pits and hearths. The hearths included both rock filled and surface hearths. There were also a number of burial pits (see Keel 1976:99). It is likely that Connestee sites in the Upper Piedmont will contain similar features.

Mississippian Period

The South Appalachian Mississippian period, from about A.D. 1100 to A.D. 1640 is the most elaborate level of culture attained by the native inhabitants and is followed by cultural disintegration brought about largely by European disease.[9] The period is characterized by complicated stamped pottery, complex social organization, agriculture, and the construction of temple mounds and ceremonial centers.

In the Upper Piedmont, Mississippian pottery includes the Pisgah and Qualla series. Pisgah ceramics are tempered with unmodified river sand, although some earlier examples contain both river sand and crushed quartz. It is decorated with complicated stamping, check stamping and ladder-like rectilinear patterns (Dickens 1970; Holden 1966). It should be noted that the Qualla series extends well into the historic period (ca.1500-1908) and is characterized by complicated stamping and bold incising. Other types described by Egloff (1967) include burnished, plain, check stamped, cord marked, and corncob impressed. At Tuckasegee brushed examples were also identified (Keel 1976). Other artifacts associated with the Mississippian period include triangular projectile points, flake scrapers, microtools, gravers, perforators, drill, ground stone objects (celts, pipes, and discoidals), and worked shell and mica (Keel 1976).

Very little evidence of Mississippian period occupation was found in the Laurens-Anderson inter-riverine survey area which is not surprising given the focus on riverine resources during this time period. Very little evidence of Mississippian occupation has been documented at the Savannah River Plant and no formal settlement-subsistence model has been created for this area (Sassaman et al. 1990:317). However, Anderson (1994) has provided a detailed examination of evidence for political change at Mississippian sites in the Savannah River Valley and should be consulted for more information.

Excavations at large Mississippian sites in the Upper Piedmont include work at the I.C. Few site which was examined as a part of the Keowee-Toxaway Reservoir project sponsored by Duke Power Company (Grange 1972). Simpson's Field (38AN8) on the Savannah River was also investigated during the Richard B. Russell Reservoir studies (Wood et al. 1986). Work at the Chauga site (38OC47) in nearby Oconee County evidenced occupation in the Early and Late Mississippian period. Ten stages of mound building were found at the site along with burials and palisades. There is evidence for increasing impoverishment of the residents through time, since burials associated with the latest phases of mound building contained fewer grave goods than earlier phases in both the occupation during the Early Mississippian and the Late Mississippian (Anderson 1994:303-305). Homes Hogue Wilson (1986) examined burials from the Warren Wilson

[9] Small pox was a major cause of death to a large number of Native Americans during the historic period. The smallpox epidemics of 1734 and 1783 reportedly killed half of the Cherokee population (Hatley 1993).

site in western North Carolina and provided some preliminary conclusions regarding social structure based on location of burials according to age and sex. For instance, she found more males than females were buried under structure floors. These males included primarily those under 25 or over 35 years old. She also found that individuals buried inside of structures were more likely to have burial goods than those buried in public areas. Burial feature types included pit burials, side-chambered burials, and central-chambered burials. Studies such as this can give great insight into the social organization of prehistoric societies.

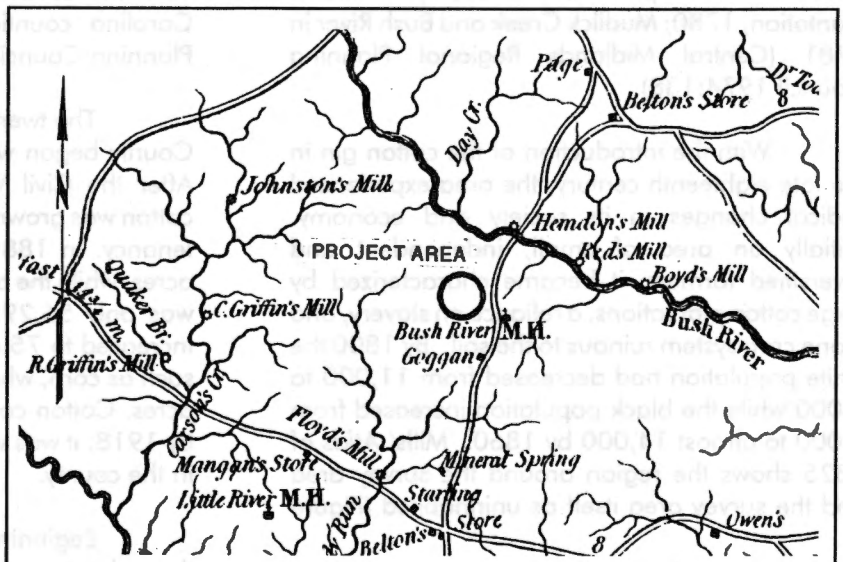

Figure 7. Portion of Mills' *Atlas* showing survey area.

The largest amount of regional work has taken place in the North Carolina mountains at sites such as Tuckasegee, Garden Creek, and Warren Wilson. At Tuckasegee a possible town house was uncovered measuring about 23 feet in diameter with a central hearth (Keel 1976). At Warren Wilson several roughly square structures were uncovered and they all measured on the average about 21 feet square. Burials were common inside of these houses and pit features were abundant. Artifacts at the Warren Wilson site included ceramics from the Swannanoa series up through the Pisgah series. (Dickens 1970).

Historic Overview

General accounts of Newberry County history are presented in Pope (1973) and Central Midlands Regional Planning Council (1974). Mills' *Atlas* also shows the location of prominent settlements and localities in the early nineteenth century and gives a brief physical and economic description of the area in the 1820s (Mills 1826).

Newberry County was settled in the middle of the eighteenth century, primarily by Scotch-Irish, English, and Germans. As part of the Old Ninety Six Judicial District established in 1769, this area retained its frontier characteristics until after the Cherokee War. Newberry County was formed in 1785 when Ninety Six District was divided into six counties (Central Midlands Regional Planning Council 1974:138).

The Ninety Six District was crippled by effects of the Cherokee War and the area soon after fell prey to a wave of lawlessness until the 1760s when the Regulators were organized by back country citizens. The Regulator movement died out in 1769 when long overdue attention to the governmental needs of the back country was given by the Charleston authorities.

Newberry's involvement in the early stages of the American Revolution was largely irrelevant as most settlers in this area had no quarrel with the English King and little identity with coastal society's politics which urged separation from Britain. Local citizens became outraged by actions of Tory leader Robert Cunningham and the infamous Redcoat officer Banastre Tarleton which converted the citizens into ardent partisans. Guerilla warfare ensued between 1779 and 1781, laying waste to the area. Three Revolutionary

encounters took place in the county: Williams Plantation, 1780; Mudlick Creek and Bush River in 1781 (Central Midlands Regional Planning Council 1974:138).

With the introduction of the cotton gin in the late eighteenth century, the area experienced radical changes in its society and economy. Initially an area of small, independent and diversified farmers, it became characterized by large cotton plantations, a reliance on slavery, and a one crop system ruinous to the soil. By 1800 the white population had decreased from 11,000 to 7,000 while the black population increased from 2,000 to almost 14,000 by 1860. Mills' *Atlas* of 1825 shows the region around the survey area and the survey area itself as uninhabited (Figure 5).

Westward emigration of people lured by the expanding cotton kingdom and increasing political polarization defending slavery grew in the first half of the nineteenth century, leading to almost unanimous citizen support in the area for nullification and secession. Although seriously stricken by the Civil War, the county was spared from the devastation experience by other South Carolina counties (Central Midlands Regional Planning Council 1974:139).

The twentieth century history of Newberry County began with cotton and ended with pulp. After the Civil War and into the early 1900s, cotton was grown almost exclusively, supported by tenancy. In 1889 cotton was grown on 72,333 acres, while the acreage devoted to all other crops was only 56,295. By 1909 the cotton acreage increased to 75,662, while that devoted to crops such as corn, wheat, and oats declined to 46,980 acres. Cotton continued to expand its base until, by 1918, it was virtually the only cash crop grown in the county.

Beginning about 1929 and continuing throughout the twentieth century, cotton acreage declined. The poor economic times of the 1920s were followed by the Great Depression, the boll weevil, and various government programs to reduce crop surplus, as well as additional programs to stem the erosive land uses found in the piedmont. By 1954 cotton was down to only 7,882 acres. In its place came oats (17,103 acres in 1954), corn (15,324 acres in 1954), and even lespedeza hay (7,617 acres).

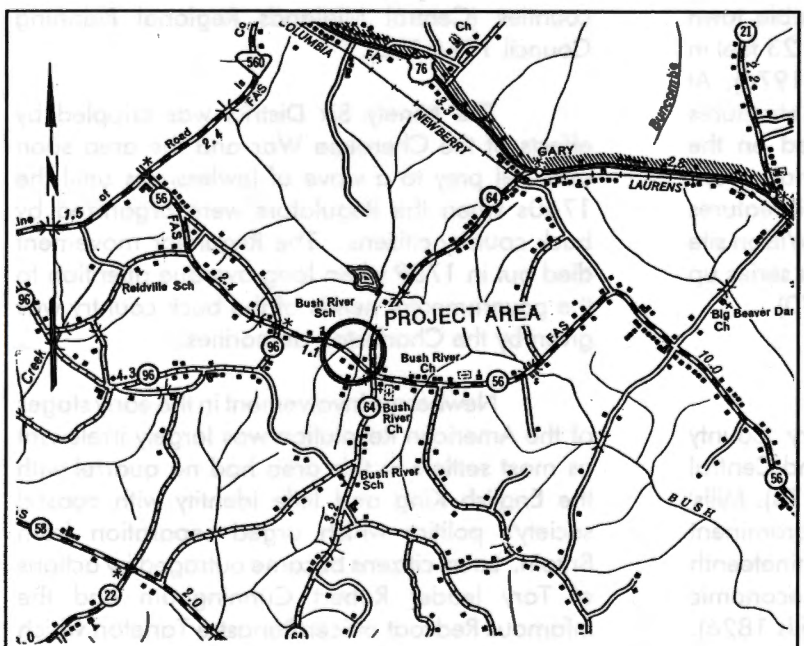

Figure 8. Portion of the 1950 General Highway and Transportation Map of Newberry County.

Another major change in the county's agricultural activity was the rise of cattle. In 1954 there were two and half times as many cattle in the county as in 1930, while the hog population remained nearly steady.

An oral history collected from Mr. William Satterwhite, owner of the study tract, reveals that in the late 1950s and early 1960s the property was used as a cattle feed lot. There were at least two barns on the tract, one smaller one for feed (which is still standing) and another larger barn for the cattle (which is represented only by demolition debris. He remembers, as a young boy, rounding up the cattle and loading them from this lot for

transport to market. While there were the barns and a number of fences, there were no domestic structures present — and none that he recalls his father ever mentioning. The 1950 *General Highway and Transportation Map of Newberry County* (Figure 8) shows that there were no domestic structures in the study area at that time.

Since the 1950s the county's economy has turned increasingly to timber. By 1956, 76,498 cords of pulpwood were produced in Newberry County, with much being processed at a chipping plant in Prosperity. There were also five lumber yards in the county (Camp 1960:2). This movement toward forest products is also echoed on the study tract, which was abandoned for cattle sometime in the late 1960s, with a portion planted in pines.

SURVEY METHODS

Methodology

The initially proposed field techniques involved the placement of shovel tests at 100 foot intervals, along transects, also spaced at 100 feet apart. All fill would be screened through ¼ inch mesh, with each test numbered sequentially. Each test would measure about 1 foot square and would normally be taken to a depth of at least 1 foot. All cultural remains would be collected, except for mortar and brick, which would be quantitatively noted in the field and discarded. Notes would be maintained for profiles at any sites encountered.

Should sites (identified as three or more artifacts within a 25 foot diameter) be identified by shovel testing, further tests would be used to obtain data on site boundaries, artifact quantity and diversity, site integrity, and temporal affiliation. The information required for completion of South Carolina Institute of Archaeology and Anthropology site forms would be collected and photographs would be taken, if warranted in the opinion of the field investigator.

The actual field methods did not deviate significantly from those initially proposed. Individual transects were laid out at 80 foot intervals, while shovel tests were excavated at 100 foot intervals. The shovel testing revealed soils consistent with the reported Wilkes Series, although the Ap horizon was thinner than anticipated — likely a result of activities which took place on the site during the mid-twentieth century.

Twenty-four shovel tests were initially conducted along seven transects. Since remains were identified, an additional six shovel tests were ultimately excavated, bringing the total to 30

Architectural Survey

As previously discussed, the area of potential effects (APE) was narrowly defined. There is an existing substation immediately across Bush River Road from the proposed new station as well as a new single pole transmission line — both of which are pre-existing intrusions. The new substation, as a result, will have little visual intrusion when taken in context. Moreover, it is proposed to be constructed on a ridge toe at a relatively low elevation, further helping to mask its appearance in the vicinity. As a result of this, we selected to examine an area 2,000 feet (approximately 0.4 mile) around the substation.

The architectural survey would record buildings, sites, structures, and objects which appeared to have been constructed before 1950 and which retained their integrity. Those which have undergone such extensive modifications to preclude their eligibility were not recorded.

For each identified resource an architectural survey form would be completed and at least one representative photograph would be taken. Permanent control numbers would be assigned by the S.C. Department of Archives and History at the conclusion of the study. The site forms for the resources identified during this study would then be submitted with this study for eventual submission to the South Carolina State Historic Preservation Office by our client.

The survey was conducted by driving the public roads (in this case, S-56 and S-64) in the APE. As was previously discussed, there were no previously identified sites.

Site Evaluation

Sites will be evaluated for further work based on the eligibility criteria for the National Register of Historic Places. Chicora Foundation only provides an opinion of National Register eligibility and the final determination is made by

the State Historic Preservation Officer at the South Carolina Department of Archives and History.

The criteria for eligibility to the National Register of Historic Places is described by 36CFR60.4, which states:

> the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and
>
> a. that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> b. that are associated with the lives of persons significant in our past; or
>
> c. that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> d. that have yielded, or may be likely to yield, information important in prehistory or history.

National Register Bulletin 36 (Townsend et al. 1993) provides an evaluative process that contains five steps for forming a clearly defined explicit rationale for either the site's eligibility or lack of eligibility. Briefly, these steps are:

- identification of the site's data sets or categories of archaeological information such as ceramics, lithics, subsistence remains, architectural remains, or sub-surface features;
- identification of the historic context applicable to the site, providing a framework for the evaluative process;
- identification of the important research questions the site might be able to address, given the data sets and the context;
- evaluation of the site's archaeological integrity to ensure that the data sets were sufficiently well preserved to address the research questions; and
- identification of important research questions among all of those which might be asked and answered at the site.

This approach, of course, has been developed for use documenting eligibility of sites being actually nominated to the National Register of Historic Places where the evaluative process must stand alone, with relatively little reference to other documentation and where typically only one site is being considered.

For architectural sites the evaluative process was somewhat different. Given the relatively limited architectural data available for most of the properties, we have focused on evaluating these sites using National Register Criterion C, focusing on the site's "distinctive characteristics." Key to this concept is the issue of integrity. This means that the property needs to have retained, essentially intact, its physical identity from the historic period.

Particular attention would be given to the integrity of design, workmanship, and materials.

Design includes the organization of space, proportion, scale, technology, ornamentation, and materials. As *National Register Bulletin* 36 observes, "Recognizability of a property, or the ability of a property to convey its significance, depends largely upon the degree to which the design of the property is intact" (Townsend et al. 1993:18). Workmanship is evidence of the artisan's labor and skill and can apply to either the entire property or to specific features of the property. Finally, materials — the physical items used on and in the property — are "of paramount importance under Criterion C" (Townsend et al. 1993:19). Integrity here is reflected by maintenance of the original material and avoidance of replacement materials.

Laboratory Analysis

The cleaning and analysis of artifacts was conducted in Columbia at the Chicora Foundation laboratories. These materials have been catalogued and accessioned for curation at the South Carolina Institute of Archaeology and Anthropology, the closest regional repository. The site forms for the identified archaeological site have been filed with the South Carolina Institute of Archaeology and Anthropology. Field notes have been prepared for curation using archival standards and will be transferred to the South Carolina Institute of Archaeology and Anthropology as soon as the project is complete.

Analysis of the collections followed professionally accepted standards with a level of intensity suitable to the quantity and quality of the remains. In general, the temporal, cultural, and typological classifications of historic remains follow such authors as Price (1970) and South (1977).

RESULTS

Introduction

The archaeological survey of the proposed substation revealed one site, 38NE345, primarily a surface scatter of mid-twentieth century artifacts thought to be associated with farm units reported by an informant to consist of a cattle barn, feed barn, and feed lot. The site is recommended not eligible for inclusion on the National Register.

The architectural survey identified no historic sites within the proposed 0.4 mile APE. The Bush River Baptist Church is just beyond the APE, but even it were included the building has been extensively remodeled in 1918 and again in 1988, dramatically altering its appearance and affecting its integrity. The original Bush River Cemetery is an additional 500 feet east of the church.

Archaeological Sites

38NE345

Site 38NE345 is a surface scatter of historic ceramics and glass (Figure 9). It is situated on the western and southwestern edges of the proposed substation, extending off the survey tract to the west. It is likely that the site is associated with the higher portion of the ridge toe on the north side of Bush River Road (S-56). The elevation in the site vicinity is about 520 feet AMSL. The site is situated adjacent to the road and extends to the north about 350 feet. It is also about 400 feet west of the creek which forms the eastern edge of the survey tract. While on a ridge toe, topography in the immediate area ranges from level to very gently sloping.

Typical vegetation in the area includes both pines and scrub hardwoods, both indicative of the area's extensive previous disturbance. The soil from the site area is identified as Wilkes sandy loam, although the A profile was truncated, consisting of about 0.4 to 0.6 foot of brown (7.5YR5/4) sandy loam overlying a B horizon of yellow, brown, red sandy clay to a depth of about 1.1 feet. Below this is a C horizon of strong brown (7.5YR5/8) sandy clay loam.

A central GPS UTM coordinate for the site (which also closely correlates to the western corner of the survey tract) is E429708 N3798197 (NAD27 datum).

The site was initially encountered with four of the original shovel tests at 100-foot intervals being positive. An additional six shovel tests were then excavated at 50 foot intervals to help collect better information on the site boundaries, as well as artifact density. Of these, only one was positive (Figure 9).

The survey identified a single structure, in ruinous condition, on the western edge of the survey property (Figure 10). Measuring about 12 feet square the single story frame building had a metal gable roof and was covered in weatherboarding. This structure has been identified by an informant, Mr. William Satterwhite, as having been used for the storage of cattle feed during the late 1950s and early 1960s, when the site area was used as a feed lot.

Also present at the southeast edge of the site was an area of brick and concrete rubble (Figure 11) measuring about 20 feet in diameter. A second area of tin remains was found at the north edge of the site. In the central area of the site was an area of heavy disturbance where shovel testing revealed almost no A horizon. Off the study tract to the west is another large area of roofing and other construction debris. Mr. Satterwhite informed us that there was a cattle barn on the property and that at least some of these remains represent that barn — which was demolished about 10 to 15 years ago. The

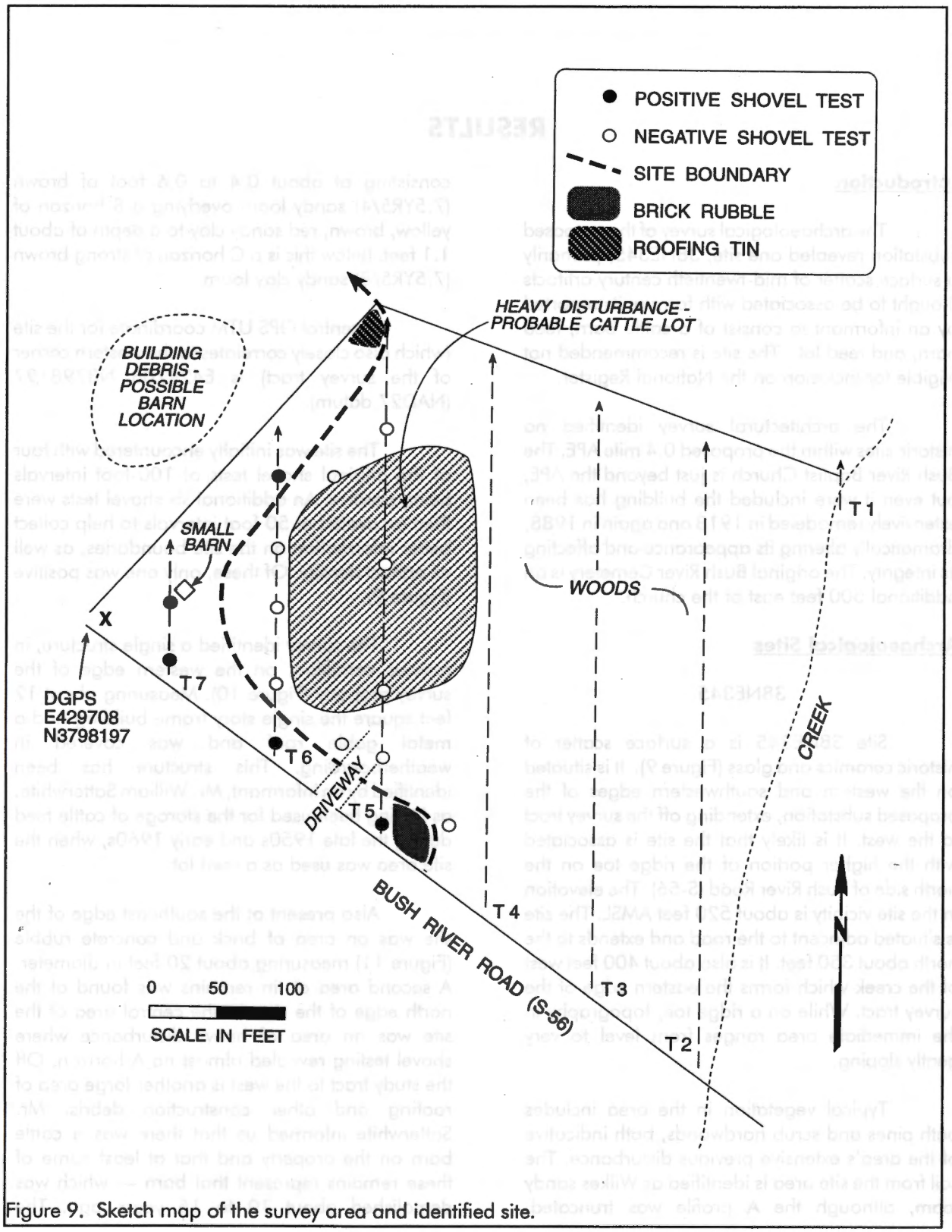

Figure 9. Sketch map of the survey area and identified site.

Figure 10. Standing feed barn in the survey tract, view to the north.

disturbed area was likely the cattle lot, with the disturbance resulting from the large quantity of cattle transported through this area on a routine basis.

The artifacts present on the site include one undecorated whiteware ceramic from T5, ST1; one clear bottle glass fragment from T6, ST1; 3 fragments of green edged whiteware (mend) from T6, ST3; and one fragment of brown container glass (probable bleach bottle) from T7, ST1. The close-interval testing produced six fragments of industrial stoneware, one wire nail, and one unidentifiable metal fragment from the test 50 feet north of T7, ST1.

While the whitewares may represent earlier materials, based on their associations and the oral history, they likely represent materials brought to this location from elsewhere. Mr. Satterwhite was very certain that there was never a tenant house or other domestic site at this location. The other materials are consistent with farm support functions from the middle to late twentieth century.

The National Register potential of this site is contingent on several factors such as the data sets present, site integrity, and ability to address significant research questions. The data sets are limited and the oral history suggests that the site function itself was similarly limited. The site exhibits considerable

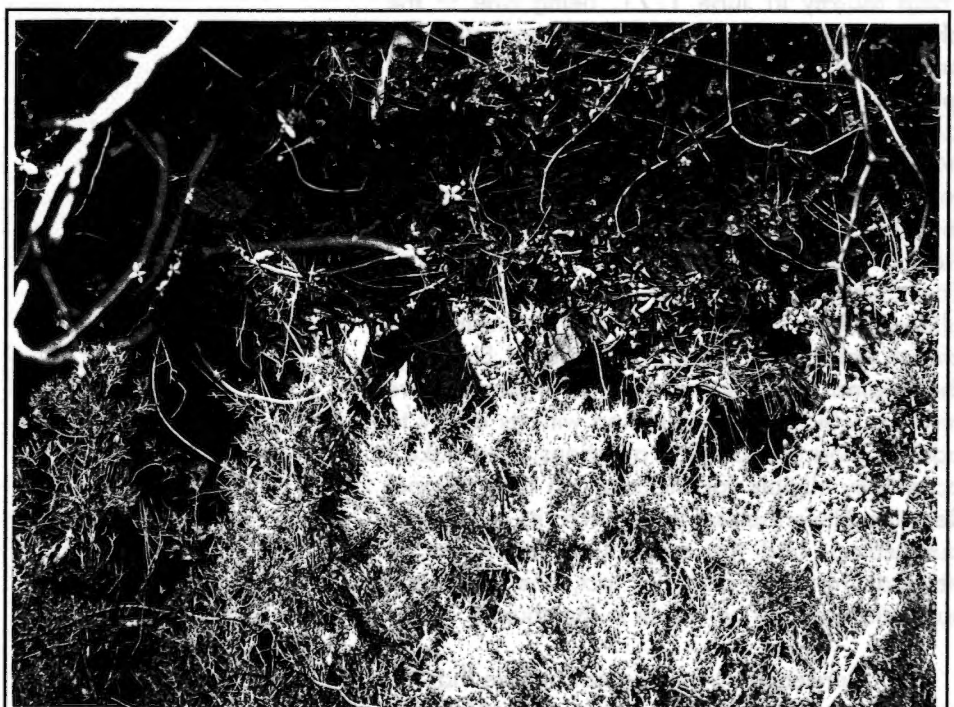

Figure 11. View of brick and concrete rubble at the south edge of the site, looking north.

evidence of intentional demolition, with at least some of the debris being moved about the site. Coupled with the damage caused by daily operation of the cattle feed lot, it is unlikely that many remains will be found in a good state of preservation. Finally, this is a class of sites where oral histories, coupled with the examination of still intact site plans, is more likely to allow us to address significant questions regarding daily operations. Given the condition of this site, it is unlikely that it can address significant research questions. Consequently, we recommend the site not eligible for inclusion on the National Register of Historic Places, pending review and concurrence of the lead agency and State Historic Preservation Office.

Architectural Sites

The survey for architectural sites found no structures at least 50 years old within the proposed 0.4 mile APE.

Just beyond the APE is the Bush River Baptist Church. A historic marker notes that the church was organized by Daniel Marshall and Philip Mulkey in June 1771, being one of the oldest Baptist congregations in the upcountry. The original church apparently stood in the old graveyard, about 500 feet to the east of the current church. The date of the existing structure is not indicated, but we could determine that it was remodeled in 1918, with additional modifications in 1988. Apparently during this second phase of work the exterior was covered in synthetic siding. The church building itself is likely not eligible, although there is a small building to the rear of the church which is not dramatically altered. Similarly, the original cemetery exhibits a range of grave markers which, in combination with its ability to address bioarchaeological questions, may make it potentially eligible for inclusion on the National Register. Nevertheless, the church, its associated outbuilding, and the original cemetery are all beyond the APE and, in fact, the proposed substation will not be visible to the church.

Consequently, we do not believe that the proposed substation will affect any National Register eligible structure within the APE and we recommend no further management activities.

CONCLUSIONS AND RECOMMENDATIONS

This study involved the examination of a proposed new substation lot measuring about 500 by 400 feet situated north of Bush River Road (S-56) about 800 feet west of its junction with Gary Road (S-64). This substation is situated almost immediately across the road from the existing substation and will be linked to the existing Bush River to Jalapa tap line. This work, conducted for Central Electric Power Cooperative, examined archaeological and architectural sites found on the proposed substation lot and within an APE of 0.4 mile. It is intended to assist Central Electric comply with its historic preservation responsibilities.

The survey area was in thick vegetation, including planted pines and scrub hardwoods on the lower elevations, at the time of the survey. Shovel tests were conducted at 100-foot intervals along transects spaced 80 feet apart. Wilkes sandy loams dominate the study tract, although some areas exhibit considerable disturbance and the A horizon has been truncated in some areas.

The investigations identified one archaeological site, 38NE345, on the western edge of the tract. Based on the recovered materials and information provided by the property owner, this site appears to represent a portion of a cattle feed lot used during the late 1950s and abandoned sometime within the next one or two decades. After it was no longer used at least one of the buildings — the cattle barn — was intentionally demolished. Our survey found that the feed barn was still standing, although close to collapse. Artifacts were recovered from only five shovel tests and these seem to be consistent with a farm activity area. The small quantity of domestic material (whiteware) may have been transported into the area by workers or the area may have been used for refuse.

The site integrity has been affected by both the activities which took place on the site and the subsequent demolition. In addition, it is likely that research on topics associated with cattle raising can be better addressed through oral histories and perhaps the exploration of still intact sites. This site is not able to address significant research questions and is consequently recommended not eligible for inclusion on the National Register of Historic Places.

The APE for the project was defined as only 2,000 feet or about 0.4 mile based on the limited nature of the activities, the presence of an existing substation immediately across the road from the proposed undertaking, and the topographic setting of the new substation at an elevation lower than the existing station. Using this APE the architectural survey found no structures at least 50 years of age which retain their integrity.

It is possible that archaeological remains may be encountered in the area during construction activities. As always, the utility's contractors should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office, or Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No further land altering activities should take place in the vicinity of these discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

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